

6HL8

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For Video and Bandpass Amplifier Applications in TV Receivers

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6 ^a	volts
Current at heater volts = 6.3	0.600 ^b	amp
Warm-up time (Average)	11	sec
Peak heater-cathode voltage (Each unit):		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 ^c max.	volts

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^d	
<i>Triode Unit:</i>			
G _T to P _T	2.8	2.8	pf
Input: G _T to (K _T , K _p +G _{3p} +IS, H)	2.8	3.0	pf
Output: P _T to (K _T , K _p +G _{3p} +IS, H)	1.6	2.4	pf

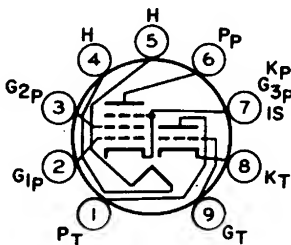
Pentode Unit:

G _{1p} to P _p	0.030 max.	0.026 max.	pf
Input: G _{1p} to (K _p +G _{3p} +IS, G _{2p} , H)	7.5	7.5	pf
Output: P _p to (K _p +G _{3p} +IS, G _{2p} , H)	2.4	3.0	pf

Mechanical:

Operating Position Any
 Type of Cathodes Coated Unipotential
 Maximum Overall Length 2-3/16"
 Maximum Seated Length 1-15/16"
 Length, Base Seat to Bulb Top (Excluding tip) 1-9/16" ± 3/32"
 Diameter 0.750" to 0.875"
 Dimensional Outline See General Section
 Bulb T6-1/2
 Base Small-Button Noval 9-Pin (JEDEC No. E9-1)
 Basing Designation for BOTTOM VIEW 9AE

Pin 1—Triode Plate
 Pin 2—Pentode Grid No.1
 Pin 3—Pentode Grid No.2
 Pin 4—Heater
 Pin 5—Heater
 Pin 6—Pentode Plate
 Pin 7—Pentode Cathode,
 Grid No.3,
 Internal Shield
 Pin 8—Triode Cathode
 Pin 9—Triode Grid



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Characteristics:

	<i>Triode</i> <i>Unit</i>	<i>Pentode</i> <i>Unit</i>	
Plate Voltage.	125	125	volts
Grid-No.2 Voltage.	-	125	volts
Grid-No.1 Voltage.	-1	-1	volt
Amplification Factor	40	-	
Plate Resistance (Approx.)	5000	150000	ohms
Transconductance	7000	10000	μ mhos
Plate Current.	12.5	12	ma
Grid-No.2 Current.	-	4.5	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 20.	-	-7	volts

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	<i>Triode</i> <i>Unit</i>	<i>Pentode</i> <i>Unit</i>	
Plate Voltage.	330 max.	330 max.	volts
Grid-No.2 (Screen-Grid) Supply Voltage	-	330 max.	volts
Grid-No.2 Voltage.	See <i>Grid-No.2 Input Rating Chart</i> at front of Receiving Tube Section		
Grid-No.1 (Control-Grid) Voltage:			
Positive-bias value.	0 max.	0 max.	volts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts.	-	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts.	See <i>Grid-No.2 Input Rating Chart</i> at front of Receiving Tube Section		
Plate Dissipation.	2.5 max.	2.5 max.	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	1 max.	0.25 max.	megohm
For self-bias operation.	1 max.	1 max.	megohm

- ^a For parallel heater operation.
- ^b For series heater operation current must be limited to 0.600 ± 0.040 amperes.
- ^c The dc component must not exceed 100 volts.
- ^d With external shield, JEDEC No.315, connected to cathode of unit under test.

